

# 6DE7

## Dual Triode With Medium-Mu Unit and Low-Mu Unit

### 9-PIN MINIATURE TYPE

#### GENERAL DATA

##### Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC) . . . . .  $6.3 \pm 0.6$  volts

Current at heater volts = 6.3 . . . . . 0.900 amp

Peak heater-cathode voltage (Each unit):

Heater negative with  
respect to cathode . . . . . 200 max. volts

Heater positive with  
respect to cathode . . . . . 200<sup>a</sup> max. volts

Direct Interelectrode Capacitances (Approx.):<sup>b</sup>

	Unit No.1	Unit No.2	
Grid to plate . . . . .	4.0	8.5	$\mu\mu\text{f}$
Grid to cathode and heater. . .	2.2	5.5	$\mu\mu\text{f}$
Plate to cathode and heater . .	0.52	1.0	$\mu\mu\text{f}$

##### Characteristics, Class A<sub>1</sub> Amplifier:

	Unit No.1	Unit No.2	
Plate Voltage . . . . .	250	60 150	volts
Grid Voltage. . . . .	-11	0 -17.5	volts
Amplification Factor. . . . .	17.5	- 6	
Plate Resistance (Approx.). . .	8750	- 925	ohms
Transconductance. . . . .	2000	- 6500	$\mu\text{mhos}$
Plate Current . . . . .	5.5	80 <sup>c</sup> 35	ma
Plate Current for grid volts = -24 . . . . .	-	- 10	ma
Grid Voltage (Approx.) for plate $\mu\text{a} = 10$ . . . . .	-20	- -	volts
Grid Voltage (Approx.) for plate $\mu\text{a} = 50$ . . . . .	-	- -44	volts

##### Mechanical:

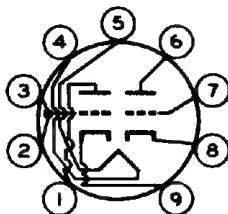
Operating Position. . . . . Any  
Type of Cathodes. . . . . Coated Unipotential  
Maximum Overall Length. . . . . 2-5/8"  
Maximum Seated Length. . . . . 2-3/8"  
Length, Base Seat to Bulb Top (Excluding tip). . . . . 2"  $\pm$  3/32"  
Diameter. . . . . 0.750" to 0.875"  
Dimensional Outline . . . . . See *General Section*  
Bulb. . . . . T6-1/2  
Base. . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)



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Basing Designation for BOTTOM VIEW. . . . . 9HF

Pin 1 - Plate of  
Unit No.2  
Pin 2 - Grid of  
Unit No.2  
Pin 3 - Grid of  
Unit No.2  
Pin 4 - Heater  
Pin 5 - Heater



Pin 6 - Plate of  
Unit No.1  
Pin 7 - Grid of  
Unit No.1  
Pin 8 - Cathode of  
Unit No.1  
Pin 9 - Cathode of  
Unit No.2

## VERTICAL-DEFLECTION OSCILLATOR

Values are for Unit No.1

### Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system<sup>d</sup>

DC PLATE VOLTAGE. . . . .	330 max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE. . . . .	400 max.	volts
CATHODE CURRENT:		
Peak. . . . .	77 max.	ma
Average . . . . .	22 max.	ma
→ PLATE DISSIPATION . . . . .	1.5 max.	watts

### Maximum Circuit Values:

Grid-Circuit Resistance:

For grid-resistor-bias or cathode-bias operation. . . . . 2.2 max. megohms

## VERTICAL-DEFLECTION AMPLIFIER

Values are for Unit No.2

### Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system<sup>d</sup>

DC PLATE VOLTAGE. . . . .	275 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE*. . . . .	1500 max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE. . . . .	250 max.	volts
CATHODE CURRENT:		
Peak. . . . .	175 max.	ma
Average . . . . .	50 max.	ma
PLATE DISSIPATION . . . . .	7 max.	watts

### Maximum Circuit Values:

Grid-Circuit Resistance:

For grid-resistor-bias or cathode-bias operation. . . . . 2.2 max. megohms

<sup>a</sup> The dc component must not exceed 100 volts.

<sup>b</sup> Without external shield.

<sup>c</sup> This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

<sup>d</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

→ Indicates a change.



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**DUAL TRIODE**  
**With Medium-Mu Unit and Low-Mu Unit**

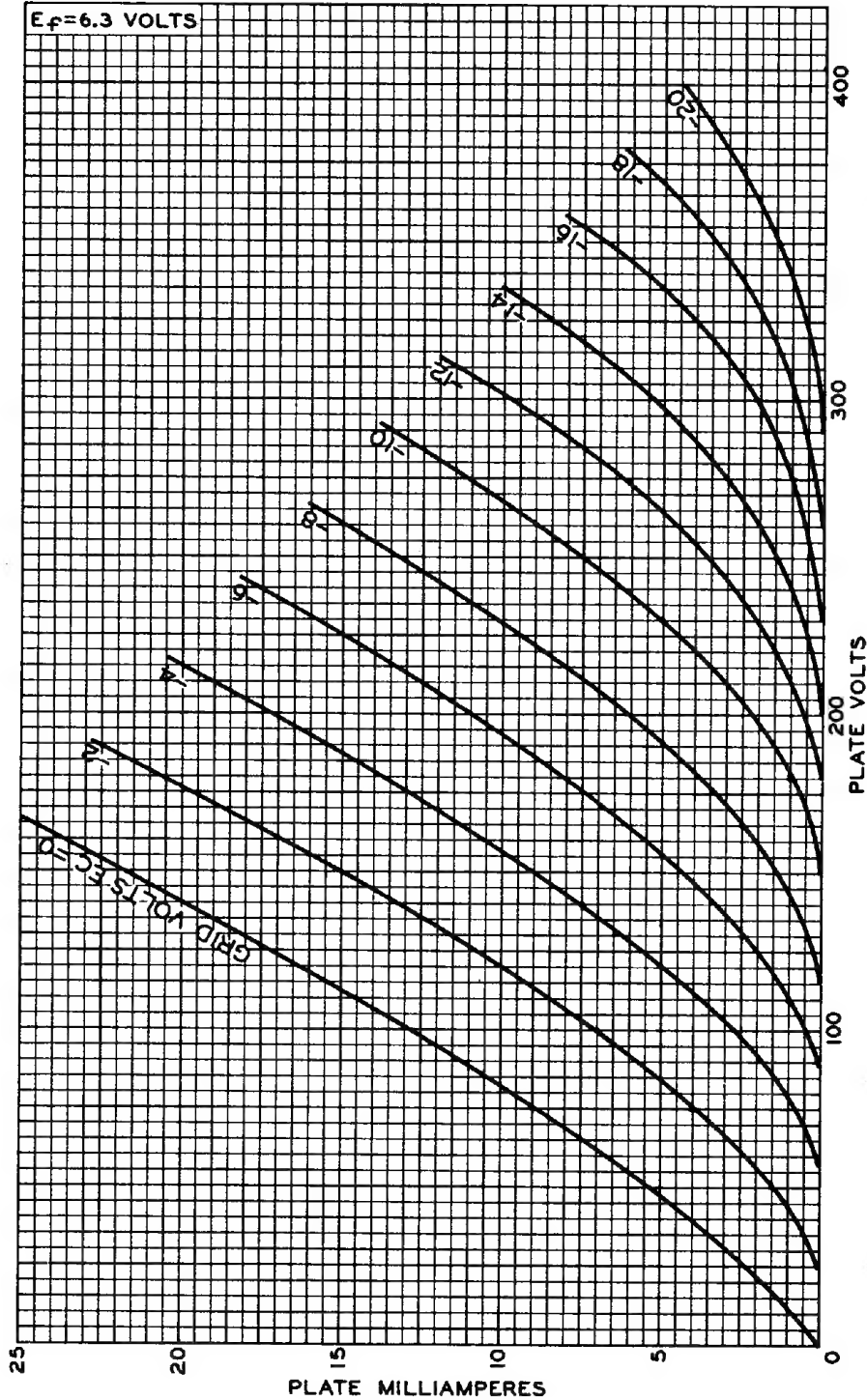
\* This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

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# AVERAGE PLATE CHARACTERISTICS UNIT N21



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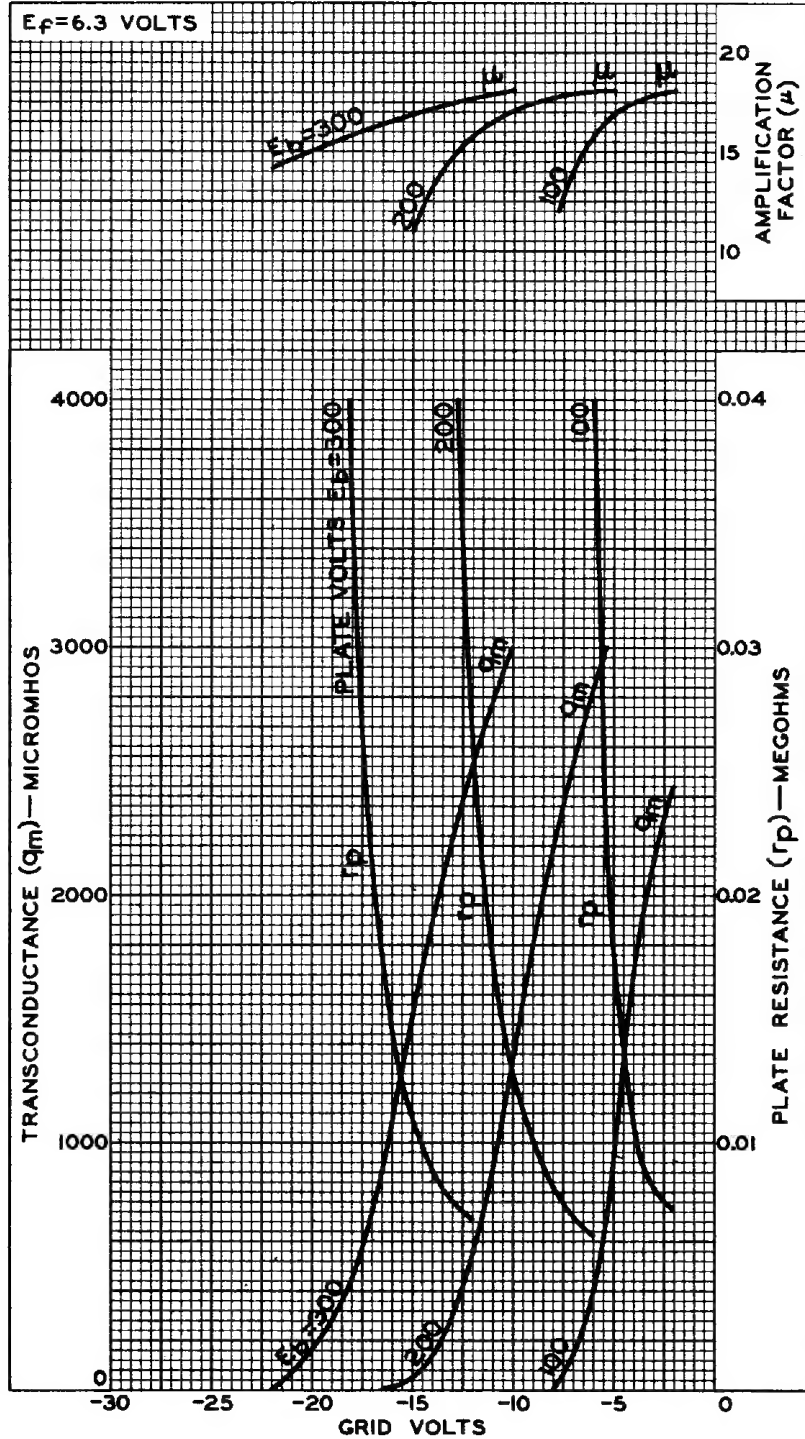
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AVERAGE CHARACTERISTICS  
UNIT No 1

6DE7

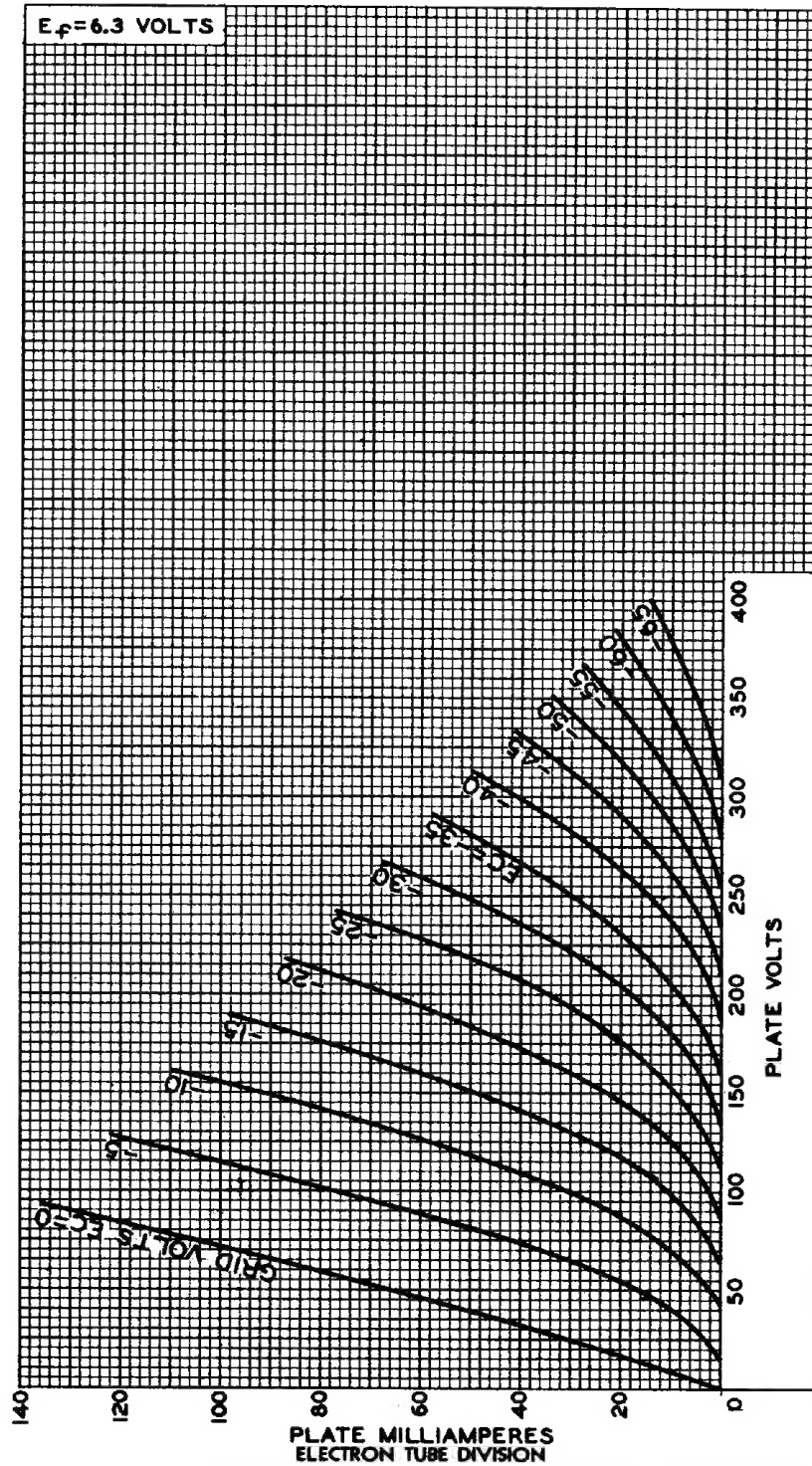


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# AVERAGE PLATE CHARACTERISTICS UNIT № 2



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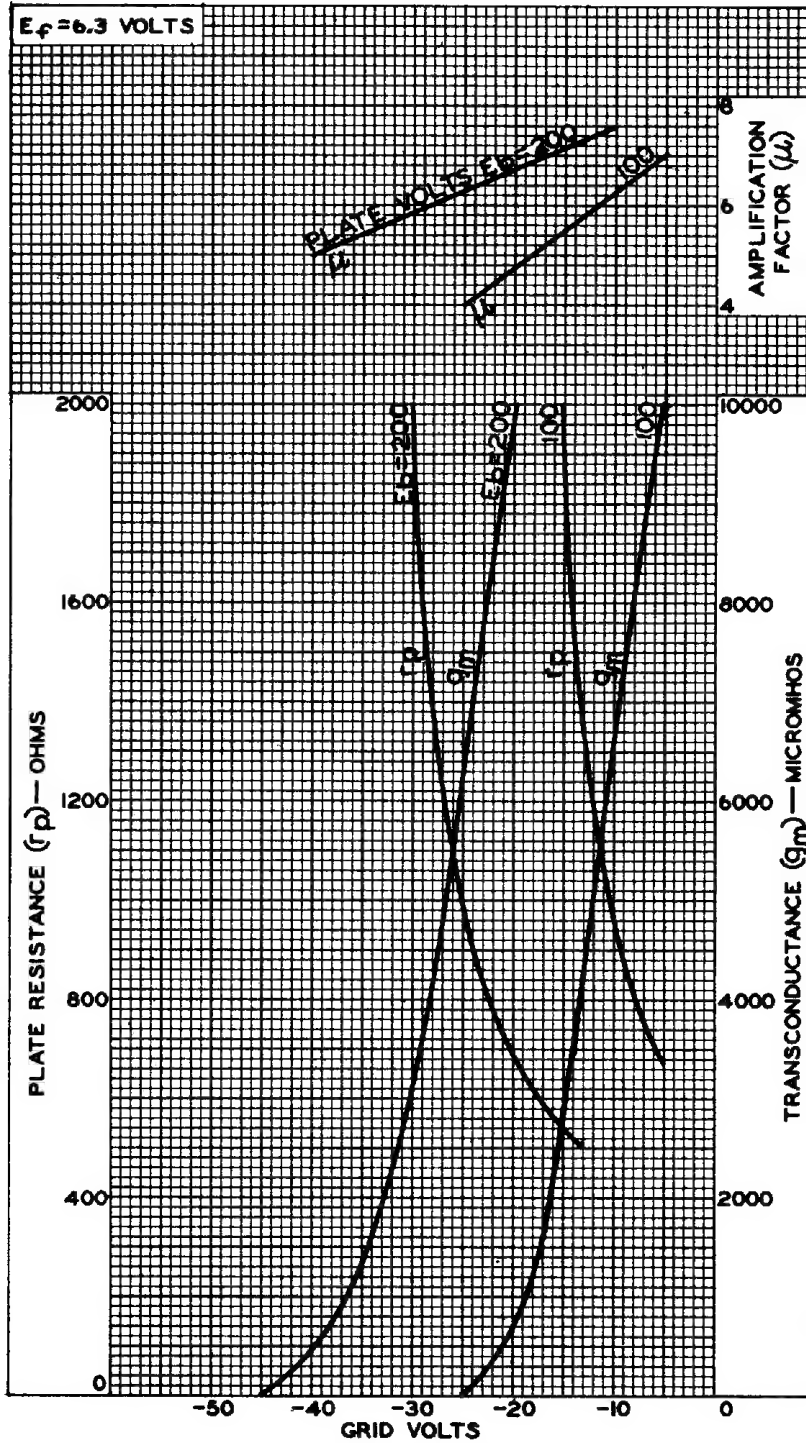
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AVERAGE CHARACTERISTICS  
UNIT № 2

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